

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

129843.1080

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on _____

Signature _____

Typed or printed name _____

Application Number

10/753,089

Filed

01/07/2004

First Named Inventor

LUO, Caidian

Art Unit

1793

Examiner

MARCANTONI, Paul

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

/Scott C. Sample/

Signature

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

Scott C. Sample

Typed or printed name

☒ attorney or agent of record.
Registration number 52,189

(214) 999-4712

Telephone number

☐ attorney or agent acting under 37 CFR 1.34.

10/5/2010

Registration number if acting under 37 CFR 1.34 _____

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below.

☐ *Total of _____ forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.:	10/753,089
Applicant:	LUO, et al.
Filed:	January 7, 2004
Art Unit:	1793
Confirmation No.:	5413
Examiner:	MARCANTONI, Paul D.
For:	FIBER CEMENT COMPOSITE MATERIALS USING BLEACHED CELLULOSE FIBERS

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In the final Office Action dated April 6, 2010, claims 1, 4-9, 11, 28 and 30-34 were rejected under 35 U.S.C. § 102(a) and (e) as being anticipated by U.S. Patent Nos. 6,506,248 and 6,346,146 ("the Duselis patents"). Furthermore, claims 1, 4-9, 11, 28, and 30-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Duselis patents each alone, or in view of Cook et al. (U.S. Patent No. 6,942,726) and Gregerson et al. (EP 263723). (It is noted that the Duselis patents have been, and remain, owned by the Applicant, and the obviousness-type double patenting rejections have been previously overcome via the submission of terminal disclaimers.)

Claims 1, 28 and 30 are independent. Claim 1 recites "a composite material comprising a cementitious matrix and cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers and wherein the bleached cellulose fibers comprise between about 10 and 17 weight percent of the total cellulose fibers incorporated into the matrix." (some punctuation omitted for clarity)

35 U.S.C. § 102(a)/(e) REJECTION

Reconsideration of the rejection under 35 U.S.C. § 102 is requested because the broad genus disclosed in the Duselis patents does not anticipate the claimed range. The two sentences shared by both patents and cited in support the rejection are: "The cellulose fibres may be bleached, unbleached, partially bleached or mixtures thereof. The fibrous materials may be present in a concentration of 0 to 25 wt %, preferably 2 to 16 wt %, more preferably 5 to 15 wt % based on the weight of the dry formulation." Notice that the percentages are per weight of the *dry formulation*. In contrast, the pending application discloses and claims a percentage of bleached fibers per total *cellulose fibers*, namely, 10 to 17 weight percent per total cellulose fibers, and that the cellulose fibers in total comprise about 0.5% to 20% of the dry formulation. Thus, the amount of *bleached* fibers recited in the pending claims comprise between about 0.06% to about 3.4% in terms of dry formulation. It is understood that it is this range the examiner refers to as overlapping the *Duselis* patents' range of 0 to 25 weight percent *total cellulose fibers* per dry formulation.

Neither *Duselis* patent discloses an embodiment of bleached fibers in the claimed range. For all formulations containing bleached fibers, the only applicable embodiment comprises 11 weight percent bleached fibers per total dry formulation. (see Examples 2, 6, 7, and 8). The prior art embodiment of 11 weight percent *falls outside of* the upper limit (3.4%) of the claimed range of bleached fibers by more than **three-fold**. However, to anticipate, a prior art patent must include a specific embodiment *in the claimed range*. In *Atofina v. Great Lakes Chemical Corp.*, 78 USPQ2d 1417 (Fed. Cir. 2006), in reversing the lower court's finding of anticipation based on overlapping temperature ranges, the Federal Circuit held that a genus cannot anticipate a species claim even through the claimed temperature range (330 to 450 °C) overlapped the range taught by the prior art patent (100 to 500 °C), because no specific embodiment was disclosed in the prior art patent that taught the claimed range. *Id.* at 1423-24; see MPEP 2131.03. The *Duselis* patents fail to disclose an embodiment of bleached fibers in the claimed range and therefore do not anticipate.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 4-9, 11, 28, and 30-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the *Duselis* patents each alone, or in view of *Cook et al.* (U.S. Patent No. 6,942,726) and *Gregerson et al.* (EP 263723). Reconsideration of the rejection under 35 U.S.C. § 103 is requested because the criticality of the claimed range of bleached fibers has been demonstrated which rebut the *prima facie* showing of obviousness over the *Duselis* patents. The *Gregerson* and *Cook* references do not overcome the deficiencies of the *Duselis* patents.

The claims recite ranges of bleached fibers that produce unexpected results. As shown in FIGS. 2, 3 and 4 of the pending application, unexpected results were achieved for improved modulus of rupture, strain, and toughness, respectively, in composite materials that contained between 12 and 17 weight percent bleached cellulose fibers per total cellulose fiber content. FIG. 2 shows that bleached cellulose fibers at 12 to 17 weight percent per fiber blend unexpectedly improves the modulus of rupture in the fiber-cement composites. Specifically, unexpected dose-dependent results are shown in the claimed range. FIG. 3 shows that bleached cellulose fibers at 12 to 17 weight percent is a critical range and unexpectedly increases strain resistance in fiber-cement composites. FIG. 4 shows that bleached cellulose fibers at 12 to 17 weight percent again is a critical range that provides unexpectedly increases toughness in fiber-cement composites. Comparable observations are not disclosed or suggested by the *Duselis* patents.

Gregerson teaches utilizing the bleached to unbleached fibers in a 3:1 ratio or 75% of bleached fibers per total cellulose fibers. *Gregerson* fails to provide any suggestion of the unexpected results obtained with the claimed range of 10 to 17 weight percent bleached fibers per total cellulose fibers. Examples 7 and 8 of *Gregerson* are relevant. Example 7 of *Gregerson* discloses the use of 1250 kg EO (which *Gregerson* indicates is bleached cellulose) in combination with 400 kg Sandame K (which *Gregerson* indicates is unbleached cellulose), which corresponds to about 75% [$75\% = 1250\text{kg} / (1250\text{kg} + 400\text{kg})$] bleached fibers of total cellulose fibers. This far exceeds the claimed range. Next, Example 8 discloses the use of 9 parts bleached fibers (EO) and 3 parts unbleached fibers (Sandame K) for a total

cellulose fibers of 12 parts. The bleached fibers comprise 9 parts of 12 parts total cellulose fibers, or **75 %** which also significantly exceeds the claimed range. *Gregerson* does not remedy the deficiencies of the *Duselis* patents. Further, *Cook* also does not remedy the deficiencies of the *Duselis* patents.

"Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range." MPEP § 2144.05. Applicant submits that the criticality of the claimed range of 10 to 17 weight percent of bleached fibers per total fibers has been demonstrated. Reconsideration of the pending claims for allowance is respectfully requested.

Respectfully submitted,
GARDERE WYNNE SEWELL LLP

/Scott C. Sample/

Scott C. Sample
Registration No. 52,189
(214) 999-4712
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